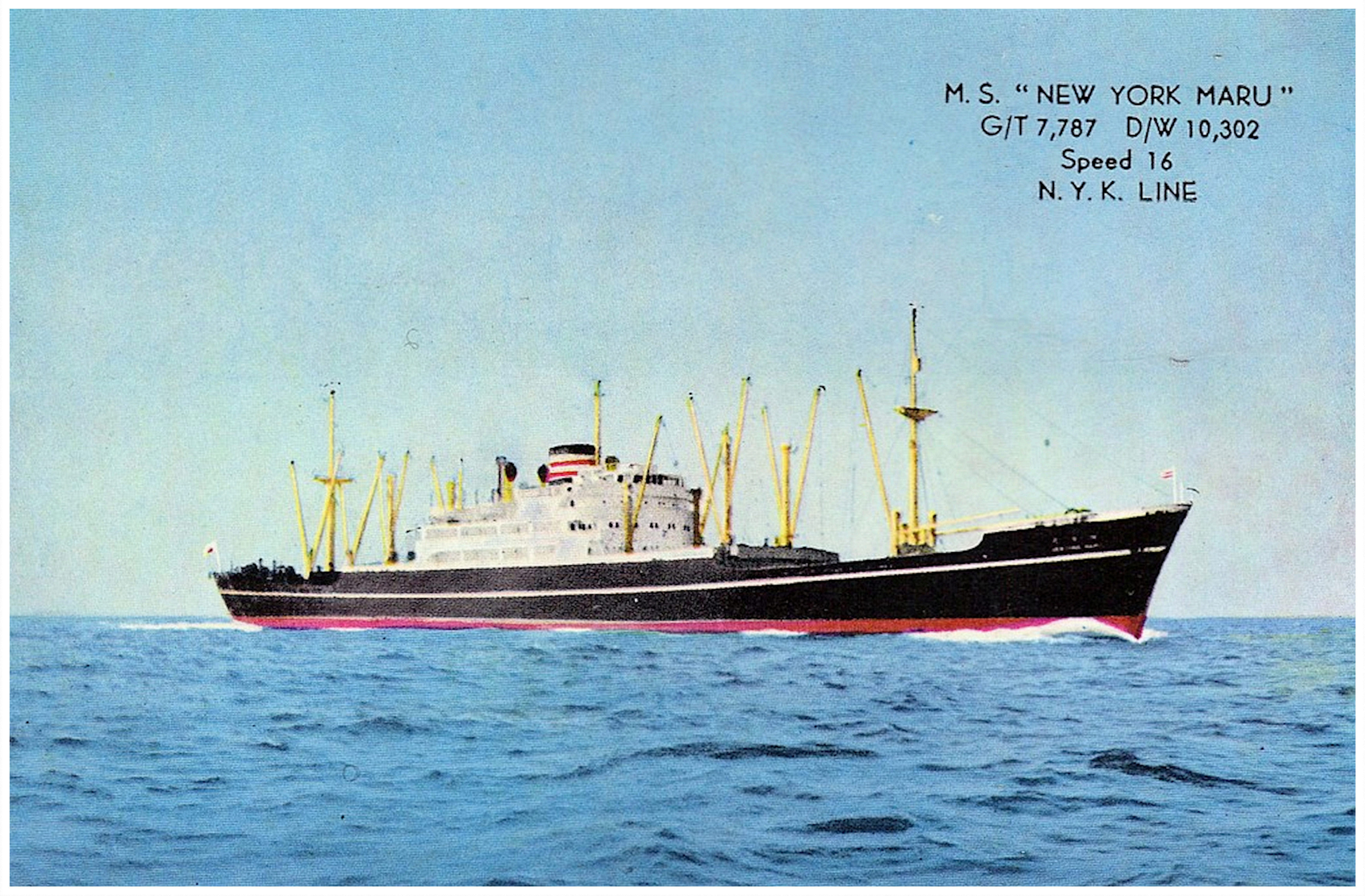
M. S. "NEW YORK MARU"
G/T 7,787 D/W 10,302
Speed 16
N. Y. K. LINE

Profile & Deck plans - (As Fitted)

64

"NEW YORK MARU" ★

LLOYD'S REGISTER OF SHIPPING
KOBE
JUN 26 1953

RECORDS DEPT.
LONDON

3

KOBE RPT. No 1411
DATED.

神谷
28.4.30
設計部長

山田
28.4.30

DESIGNING DEPARTMENT
NAGOYA SHIPBUILDING CO. LTD.
JAPAN

LONDON
MAY 11. 1953

013596-013603-0145

圖面[illegible]

当社ニ於テ改訂ス
27-6-13

LLOYD.NK 船主 各承認図ニヨリ改正済

CONSTRUCTION PROFILE AND DECK PLANS

PRINCIPAL DIMENSIONS

		M	FT
LENGTH (OVER ALL)		150.300	492.12
(P.P.)	"L"	140.000	459.31
BREADTH	"B"	19.000	62.34
DEPTH MLD (ABOVE TOP OF KEEL)	"D"	10.500	34.45
LOAD DRAUGHT (ABOVE TOP OF KEEL)	"d"	8.383	27.50

TWEEN DECK HEIGHTS

			M	FT
SECOND DK TO UPPER DK	(AT SIDE)		3.000	9.86
UPPER DK " FCL DK	(AT CENTRE)		2.300	7.55
" BRIDGE DK	(" ")	AT MIDSHIP	2.650	8.69
		AT BREAKS	2.450	8.04
" POOP DK	(" ")		2.300	7.55
BRIDGE DK " UPPER BRIDGE	(AT CENTRE)		2.350	7.71
UPPER BRIDGE " BOAT DK	(" ")		2.450	8.04
BOAT DK " FLYING BRIDGE	(" ")		2.450	8.04
FLYING BRIDGE " COMPASS BRIDGE	(" ")		2.300	7.55

CAMBER & SHEER

		INCH
CAMBER OF SECOND DECK	80 mm	3.15
" UPPER & BRIDGE DECK	380 mm	15.00
" UPPER BRIDGE DECK ABOVE	200 mm	7.87
SHEER (FORE)	2M840	9.32 FT
(AFT)	1M420	4.66

NOTE

BULKHEAD (W.T. OR O.T.) STRONG BEAM & WEB FRAME AS PER PLAN

MAIN ENGINE 2~4,250 B.H.P. URAGA SULZER ENGINES

ABRIDGEMENTS & MARKS

A OR ANG.	ANGLE
B.A.	BULB ANGLE
C.H.	CHANNEL
F.B.	FLAT BAR
R OR RIV	RIVET
⅃	INVERTED ANGLE
⊖	SINGLE VEE BUTT WELD
⊖⊖	DOUBLE " " "

紐育丸

S 104

CONSTRUCTON PROFILE
AND
DECK PLANS
ON
D.W 10800T
TWIN SCREW
CARGO MOTORSHIP
(FINISHED PLAN)

鋼材配置
(完成圖)

SCALE	1:100	DEPARTMENT CHIEF	28.4.30
ITEM	H 1		

HULL DESIGNING SECTION
OF
DESIGNING DEPARTMENT
NAGOYA SHIPBUILDING CO. LTD.
NAGOYA, JAPAN

SECTION CHIEF		IN CHARGE	
CHIEF IN CHARGE	Watanabe	DESIGNER	Nakamura
		DRAWER	Yamasaki
DESIGNED			
ISSUED	28. 4. 30		
SUB ITEM	完	4	
PL NO			

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"NEW YORK MARU" ★

Midship section (as fitted).

RECORDS DEPT.
LONDON

②

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Lloyd's Register Foundation

013596-013603-0147

As Fitted

ライト

LLOYD'S REGISTER
KOBE
JUN 26 1953
OF SHIPPING

KOBE RPT. NO. 1411
DATED.

神谷
28.4.30

山田
28.4.30

DESIGNING DEPARTMENT
NAGOYA SHIPBUILDING CO. LTD.
JAPAN

MAY 11. 1953 LONDON

013596-013603-0147

MIDSHIP SECTION

L.R. CLASS ✠ 100 A 1 ✠ LMC

N.K. CLASS SCALE 1/25 N.S. ✲ MNS ✲

PRINCIPAL DIMENSIONS ~

		M	FT
LENGTH PP	"L"	140.000	(459.31)
BREADTH	"B"	19.000	(62.34)
DEPTH MLD. (ABOVE TOP OF KEEL)	"D"	10.500	(34.45)
DRAFT (DESIGNED) (Do.)	"d"	8.375	(27.48)
DRAFT (Do.)		8.383	(27.50)

FRAME SPACE ~

BOTH PEAKS	610
.2L FROM FORE END ~ COLL. B^HD	685
ELSEWHERE	750

EQUIPMENT NUMERAL ~

L × (B + D)	140.00 ×	(19.00 +	10.5)	4,130.00
FCLE	3/4 ×	11.71 ×	2.30	20.20
BRIDGE	3/4 ×	62.25 ×	2.65	123.72
POOP	3/4 ×	6.85 ×	2.30	11.82
BRIDGE DECK HOUSE	1/2 ×	30.60 ×	2.35	35.96
UPP. BRI. DECK HOUSE	1/2 ×	30.60 ×	2.450	37.49
BOAT DECK HOUSE	1/2 × (29.70 × 2.45	+ 13.50 ×	0.50)	39.76
			METRIC UNIT	4398.95
			ENGLISH	47,332.70

EQUIPMENT ~ d+

BOWER ANCHORS	STOCK LESS		3 ~ ※4200 kg EACH
STREAM ANCHOR	EX. STOCK		1 ~ 1195 kg
CHAIN CABLE	⊛ CAST STEEL	56φ ×	※600 M
STREAM LINE	S.F.S.W.R. (6 ~ 24)	1 ~ 40φ ×	225 M
TOW LINE	S.F.S.W.R. (6 ~ 24)	1 ~ ※48φ ×	240 M
HAWSERS	MANILA ROPES	2 ~ ※70φ ×	185 M
WARPS	〃 〃	2 ~ 65φ ×	185 M

⊛ SPECIAL STEEL PER SEC 35 D-3510 OF THE RULES FOR QUALLITY AND TESTING OF MATERIALS. JIS GRADE 2.

※ SPECIALLY INCREASED BY OWNER'S REQUIREMENT

SHELL PLATE					
			0.4 L∅	0.05 L AT END	REMARK
KEEL PLATE			1400 × 23		THROUGHOUT
IN WAY OF BRIDGE	BOTTOM PL		18		
	SIDE PL		16		
CLEAR OF BRIDGE	BOTTOM PL		19	16	
	SIDE PL		17	12	
SHEER STRAKE	ON UPP D^K		1900 × 25	12	AT BREAK 38
	ON BR. D^K		2400 × 18.5		AT BREAK 23
BRIDGE SIDE			16		
BOTTOM FORWARD					0.25 ~ 0.2 L 21 0.2 L ~ FORWARD 20.5
FCL SIDE				11	
STERN FRAME PL				17	
BOSS PL				17	
POOP SIDE				10.5	

ENGINE SKY-LIGHT
ENGINE CASING TOP
FLYING BRIDGE DECK
ACCOMMODATION SPACE
DECK COMPOSITION
BOAT DECK
ACCOMODATION SPACE
DECK COMPOSITION
ENGINEERS QUARTER
UPPER BRIDGE DECK
CREW'S QUARTER
WOODEN PARTITION
BRIDGE DECK
STORE SPACE
BRIDGE CARGO SPACE
W.S. QUARTER PILLAR AS PER PLAN
VERTICAL SPARRING
UPPER DECK
STRONG BEAM & WEB FRAME AS PER PLAN
ENGINEERS STORE
TWEEN DECK CARGO SPACE
SECOND DECK
STRONG BEAM & WEB FRAME IN ENG ROOM AS PER PLAN
CARGO HOLD
MIDSHIP FRAME SPACE 750
SIDE GIRDER (IN HOLD)
MAIN ENGINES =
URAGA SULZER DIESEL ENGINES (6SD72)
2 × 4250 B.H.P.
WEIGHT ABOUT 2 × 317 T
PLAN OF ENGINE SEATINGS TO BE SUBMITTED
ENGINE ROOM
SHAFT C.L.
TO BE COMPLETELY HORIZONTAL
BOTTOM CEILING 65 SOFT WOOD 75 UNDER HATCH WAY
LIGHT FLOOR
HEAVY FLOOR
CENTRE GIR.
SIDE GIRDER PL 9.5
N
S
M
L
J
H
G
E
D
C
B
A
K
TOP OF KEEL
SECTION IN WAY OF WING TANK AND SHAFT TUNNEL
SECTION AT FR NO 56
HEIGHT OF OVER FLOW PIPE ABOVE CROWN OF WING TANK 8M020
WING TANK TOP CEILING 65 SOFT WOOD, UNDER HATCH WAY 75 S.W. FITTED ON 13 BATTENS
WING TANK TOP
TRIPPING B^KT 10 AT EVERY FOUR FRME SPACE
WOODEN SHEATHING
WING TANK
CONTINUOUS GUSSET PL
MIDDLE LINE STRAK 1,400 × 13
SECTION IN WAY OF CLEAR OF BRIDGE
TOP RAIL 180 × 75 × 9.5 B.A.
STAYS ARE FITTED 2 F.S. APART
STRINGER PL 1600 × 27 ✓ AT BREAK 36 ✓
UPP. DECK
200 × 200 × 25 A
SHEER ST. 1900 × 25 AT BREAK 38 ✓
✓ PARTICULARS OF THE STEEL TO BE USED IN THE PARTS INDICATED ARE TO BE SUBMITTED IN ACCORDANCE WITH PARA. P403 OF THE RULES
TWEEN DECK FRAME 200 × 90 × 10 B.A.
SIDE PL 17
D^K COLLAR PL 10.5
2ND DECK
HOLD FRAME 300 × 90 × 10/15.5 C.H.
GUSSET PLATE
TANK TOP PL
GUSSET PL 12 8 ~ 22φ RIV

圖面來歷

当社ニ於テ設計ス
27-7-30

LLOYD. NK. 船主各承認図ニヨリ改正済

WORKING PL. 承認図ニヨリ改正済
28-1-29.

[illegible]育丸

S·104

MIDSHIP SECTION

(FINISHED PLAN)

中央切断

(完成圖)

SCALE	1/25	DEPARTMENT CHIEF	神谷 28.4.30
ITEM	H — 1		

HULL DESIGNING SECTION
OF
DESIGNING DEPARTMENT
NAGOYA SHIPBUILDING CO. LTD.
NAGOYA, JAPAN.

SECTION CHIEF		IN CHARGE	
CHIEF IN CHARGE		DESIGNER	
		DRAWER	
DESIGNED	JULY 30th 1952		
ISSUED	28. 4. 30		
SUB ITEM	完 3		
PL. No.	H — 6123		

013596-013603 0147

"NEW YORK MARU."

Engine Room Arrangement.

RECORDS DEPT.
LONDON

15

013596-013603-0148

ロイド協会

完成圖

KOBE RPT. NO. 1411
DATED.

LONDON

神谷
28.5.2

DESIGNING DEPARTMENT
NAGOYA SHIPBUILDING CO. LTD.
JAPAN

MAY 11 1953

013596-013603-0148

SECTION AT FR. NO. 95 LOOKING AFT.
SECTION AT FR. NO. 95 LOOKING FORE
SECTION AT FR. NO. 85 LOOKING AFT.
DONKEY BOILER (EXH. GAS & OIL BURNING)
REF. MACHINE ROOM
STARTER
NO. 1 FRESH W. COOLER
TRANSFORMERS
MAIN AIR RESERVOIR
TELEPHONE BOX
COOLING FRESH WATER PUMP
NO. 2 COOLING SEA WATER PUMP
NO. 4 FRESH WATER TANK
COOLING FRESH W. TANK
FEED WATER PUMP FOR EXH. GAS BOILER
OBSERV. TANK
NO. 2 F.O. BURNIG PUMP
NO. 1 F.O. BURNING PUMP
F.O. SETTLING T. FOR BOILER (3M³)
AUX. CONDENSER
FEED W. FILTER
FUEL OIL HEATERS
NO. 2 FEED W. PUMP
NO. 1 FEED W. PUMP
FEED WATER T. (3M³)
FEED W. HEATER

TANK LIST

NAME	NO.	CAPACITY
FUEL OIL SETTLING TANK FOR MAIN ENG.	2	16 M³
FUEL OIL SERVICE TANK FOR MAIN ENG.	2	12 M³
FUEL OIL SETTLING TANK FOR MAIN & AUX. DIESEL	1	5 M³
FUEL OIL SERVICE TANK FOR MAIN & AUX. DIESEL	1 1	5 M³ 3
FUEL OIL SETTLING TANK FOR DONKEY BOILER	2	3 M³
PURIFIED F. O. TANK	1	ABOUT 12.6 M³
FUEL OIL RESIDUE TANK	1	0.5 M³
FUEL OIL SAVEALL TANK	1	0.5 M³
LUB. OIL MAIN DRAIN TANK	1	ABOUT 26 M³
SPARE LUB. OIL TANK	1	ABOUT 23.9 M³
LUB. OIL SEETTLING TANK FOR MAIN ENG.	2	10 M³
LUB. OIL RESERVE TANK	1	7 M³
LUB. OIL SETTLING TANK FOR AUX. DIESEL	1	0.5 M³
L. O. DRAIN TANK FOR MAIN ALTERNATOR ENGINE	2	0.4 M³
PURIFIED LUB. OIL TANK	1	0.5 M³
LUB. OIL RESIDUE TANK	1	0.5 M³
LUB. OIL SAVEALL TANK	1	0.5 M³
CYLINDER OIL TANK	2	9 M³
WINCH OIL TANK	1	0.2 M³
KEROSENE TANK	1	0.4 M³
LUB. OIL DAILY SERVICE TANK	1	0.5 M³
COOLING FRESH WATER TANK	1	ABOUT 12.5 M³
COOLING FR. W. COMPENSATION TANK	1	2 M³
FUEL VALVE COOLING FR. W. EXPANSION TANK	1	1.5 M³
BOILER FEED TANK	1	5 M³
HOT WATER TANK FOR PURIFIER	1	0.15 M³
OBSERVATION TANK	1	0.8 M³
WASTE TANK FOR OILY BILGE SEPARATOR	1	0.25 M³

PARTICULARS OF HULL

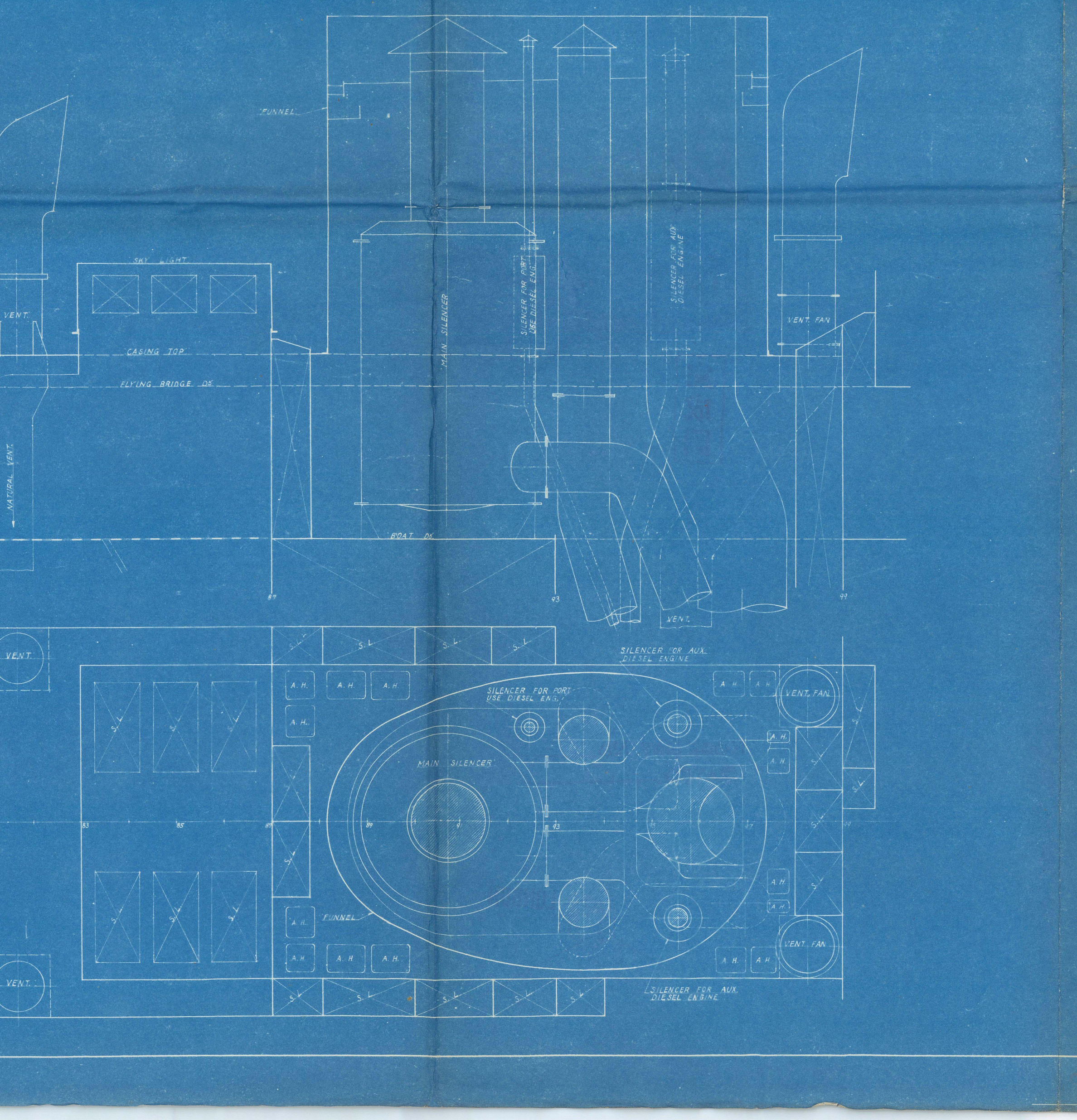
LENGTH OVERALL, ABOUT	150.3 M
LENGTH BETWEEN PERPENDICULARS	140.0 M
BREADTH MOULDED	19.0 M
DEPTH MOULDED	10.5 M
GROSS TONNAGE, ABOUT	7,550 TONS
DEAD WEIGHT 〃	10,100 METRIC TONS
SEA SPEED (THE SERVICE CONDITION)	16 KNOTS

PARTICULARS OF MACHINERIES

NAME	NO.	TYPE	CAPACITY	REMARKS
MAIN ENGINE	2	URAGA-SULZER "6SD" TWO CYCLE, SINGLE ACTING, AIRLESS INJECTION, MARINE DIESEL ENGINE	NORMAL 4250 BHP × 127 R.P.M.	
DONKEY BOILER	1	CYLINDRICAL BOILER, OIL BURNING EQUIPMENT	10 KG/CM² × EVAR. 7000 KG/H	
	1	Do. COMPOSITE TYPE	10 〃 × 2500 〃	
MAIN STARTING AIR RESERVOIR	2	HORIZONTAL	11.5 M³ × 30 KG/CM²	
AUXILIARY AIR RESERVOIR	1	Do.	400 L × 30 KG/CM²	
EMERGENCY AIR RESERVOIR	1	VERTICAL	120 L × 20 KG/CM²	
PROPELLER	2	4 BLADED BUILTUP TYPE	DIA. 4,450φ × PITCH 4,320	
MAIN GENERATING ENGINE	2	FOUR CYCLE, SINGLE ACTING, DIESEL ENG.	450 BHP × 400 R.P.M.	
MAIN ALTERNATOR	2	DRIP PROOF	A.C. 60 ∼ 270 KW × 225 V	
COOLING SEA WATER PUMP FOR MAIN ALTERNATOR DIESEL	1	ELECT. HORIZONTAL CENTRIFUGAL	30 M³/H × 20 M	FOR MAIN GENERATING ENG.
AUXILIARY GENERATING ENGINE	1	FOUR CYCLE, SINGLE ACTING, DIESEL ENG.	120 BHP × 450 R.P.M.	
AUXILIARY ALTERNATOR	1	DRIP PROOF	A.C. 60 ∼ 80 KW × 225 V	
MAIN AIR COMPRESSOR	2	VERTICAL TWO STAGES	300 M³/H × 30 KG/CM²	DRIVEN BY MAIN GENERATING ENG.
EMERGENCY AIR COMPRESSOR	1	HAND OPERATING	20 KG/CM²	
COOLING SEA WATER PUMP	2	ELECT. HORIZONTAL CENTRIFUGAL	420 M³/H × 20 M	
COOLING FRESH WATER PUMP	1	Do.	295 M³/H × 25 M	WITH SELF PRIMING DEVICE
PISTON COOLG & LUBRICATING OIL PUMP	3	ELECT. HORIZONTAL GEAR	160 M³/H × 45 M	
FUEL VALVE COOLING FR. W. PUMP	1	ELECT. HORIZONTAL CENTRIFUGAL	12 M³/H × 30 M	
FUEL OIL SHIFTING PUMP	2	ELECT. HORIZONTAL GEAR	30 M³/H × 30 M	
FUEL OIL SERVICE PUMP	2	Do.	5 M³/H × 25 M	
LUBRICATING OIL SHIFTING PUMP	1	Do.	Do.	
FRESH WATER PUMP	1	ELECT. VERTICAL 2 THROW PISTON	10 M³/H × 30 M	WITH AUTOMATIC CONTROL DEVICE
SANITARY PUMP	2	ELECT. HORIZONTAL CENTRIFUGAL	8 M³/H × 30 M	Do.
BILGE & BALLAST PUMP	1	ELECT. VERTICAL CENTRIFUGAL	200/100 M³/H × 30/60 M	
FIRE & GENERAL SERVICE PUMP	1	Do.	Do.	
BILGE PUMP	1	ELECT. VERTICAL 2 THROW PISTON	30 M³/H × 35 M	
FEED WATER PUMP FOR OIL BURN. BOILER	2	VERTICAL WEIR'S	13 M³/H × 140 M	
FEED WATER PUMP FOR COMPOSITE TYPE BOILER	1	ELECT. VERTICAL 2 THROW PISTON	2 M³/H × 120 M	
FUEL OIL BURNING PUMP FOR BOILER	2	VERTICAL WEIR'S	2 M³/H × 140 M	
FORCED DRAFT FAN	1	ELECT. HORIZONTAL AXIAL FLOW	200 M³/M × 80 MM Aq	
VENTILATING FAN	2	ELECT. VERTICAL AXIAL FLOW	400 M³/M × 30 MM Aq	
FUEL OIL PURIFIER	2	ELECT. ENCLOSED CENTRIFUGAL	DELAVAL 4000 L/H SHARPLES 2000 L/H	FOR HEAVY OIL "A"
FUEL OIL CLARIFIER	2	Do.	Do.	Do.
LUB. OIL PURIFIER	2	Do.	1000 L/H	
AUXILIARY CONDENSER	1	HORIZONTAL NON-VACUUM	C.S. 75 M²	
FEED WATER HEATER	1	HORIZONTAL SURFACE HEATING	H.S. 7 M²	
FEED WATER FILTER	1	CASCADE		
FRESH WATER COOLER	2	HORIZONTAL SURFACE COOLING	C.S. 120 M²	
FRESH WATER COOLER FOR FUEL VALVE	1	Do.	C.S. 8 M²	
LUBRICATING OIL COOLER	2	HORIZONTAL SURFACE COOLING	C.S. 120 M²	
FUEL OIL HEATER FOR BOILER	2	VERTICAL SURFACE HEATING	H.S. 3.7 M²	
Do. FOR MAIN ENGINE	3	HORIZONTAL SURFACE HEATING	H.S. 3.7 M²	
Do. FOR PURIFIER	2	VERTICAL SURFACE HEATING	H.S. 4.3 M²	
Do. FOR CLARIFIER	2	Do.	H.S. 4.3 M²	
LUB. OIL HEATER	1	Do.	H.S. 2.5 M²	
OILY BILGE SEPARATOR	1	TURBULO	30 M³/H	
OVERHAULING CRANE FOR MAIN ENGINE	2	ELECT. (HOISTING)	3 TONS	
MAIN ENGINE TURNING MOTOR	2		12 HP	
UNIVERSAL MACHINE	1	ELECT.	5 HP	
ELECTRIC WELDING MACHINE	1		7 KW	
REF. MACHINE	2	FREON	7.5 HP	
REF. MACHINE COOLING W. PUMP	4	HORIZONTAL CENTRIFUGAL	12 M³/H × 18 M	
F. O. SERV. PUMP FOR CENTRIFUGE.	1	ELECT. HORIZONTAL GEAR	2500 L/H × 20 M	
FUEL OIL GENERAL SERVICE PUMP	2	Do.	2.5 M³/H × 120 M	
WINDLASS	1	STEAM DRIVEN HORIZONTAL	19 T × 9 M/M	
WINCH	18	Do.	5 T × 30 M/M	
MOORING WINCH	1	Do.	8 T × 25 M/M	
STEERING GEAR	1	ELECTRO HYDRAULIC	35 HP	

STORY

1. DESIGNED IN THIS OFFICE.
MAR. 25TH 1953.



合計	控	電気課	船殻課	〃 外業	製正	〃 鋼工	二造機和	検査安全	艤装員	監督	船主	配圖先
		1	1	3	3	3	1	1	1	1	1	
合計	控	係扣	機関係	係長			電気設計	〃 外艤	〃 内艤	艤設計 船殻	艤装課	配圖先
20	1	4	1	1			1	1	1	1	1	

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S·104

ENGINE-ROOM ARRANGEMENT (FINISHED PLAN)

機関室
全体装置
（完成圖）

LLOYD'S REGISTER OF SHIPPING
24 JUN 1953

SCALE	1:50	DEPT. CHIEF	
ITEM	M-1		28.5.2

MACHINERY DESIGNING SECTION
OF
DESIGNING DEPARTMENT
NAGOYA SHIPBUILDING CO. LTD.
NAGOYA JAPAN

SECTION CHIEF	岡本 28.4.30	INCHARGE	渡辺
CHIEF INCHARGE		DESIGNER	
		DRAWER	K. Shirai
DESIGNED	MAR. 25TH 1953		
ISSUED	28.4.28		
SUB. ITEM	MI-1		
PL. NO.	M. 8845		

"NEW YORK MARU" ★

Sternframe and rudder

RECORDS DEPT.
LONDON
5

013596 — 013603-0146

Certified copy of approved plan

LLOY

LLOYD'S REGISTER ★ OF SHIPPING
KOBE
JUN 26 1953

LONDON

KOBE RPT. NO. 1411
DATED.

DESIGNING DEPARTMENT
OYA SHIPBUILDING CO. LTD.
JAPAN

山田
28.4.30

MAY 11 1953

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Lloyd's Register
Foundation

REAMER BOLT 1/2
KEY
SECTION M-M
DETAIL OF RUDDER 1/15
EYE BOLT 1/5
SECTION AT KEE WAY 1/10
TILLER (JANNE TYPE)
UPPER DECK
RABBET OF RUDDER FRAME 1/5
F.0 SECTION LOOKING AFT
F.1 SECTION LOOKING FORWARD
STERN FRAME LOOKING FORWARD
LINES OF RUDDER INCLUDING RUDDER PLATE THICKNESS
STRAIGHT LINE
SECTION N-N
SECTION C-C
CARRYING DISC
SECTION D-D
SECTION A-A
SECTION P-P
DETAIL OF LIFTING HOLE
SECTION B-B
SECTION E-E
SECTION J-J
SECTION F-F
DETAIL 1/4
PLUG SCREW 1/2
DETAIL OF WELDED FIN 1/4
TO BE CUT OFF FIN AFTER WELDING AROUND
RUDDER PLATE
WELDED FIN
SECTION G-G
SECTION H-H
BUSH STOPPER RING
BASE LINE
2ND DECK
RUDDER TRUNK
SECTION a~a
SECTION b~b (6M0 W.L)
SECTION c~c
RABBET
PINTLE CENTER LINE
6 W.L
5 M W.L
4 M W.L
3 M W.L
2 M W.L
1 M W.L

MATERIAL LIST

REMARK	MARK	NOMENCLATURE	MATERIAL	Nº	MAKING SHOP	FINISHING SHOP	ERECTING SHOP
仕上迄 (0.6t)	1	STERN FRAME	CAST STEEL	1	外註	外註	船殻
粗材 (0.29t)	2	TOP PINTLE WITH NUT & SPLIT PIN	FORGED STEEL	1	〃	一造機	艤装
	3	SLEEVE FOR TOP PINTLE	GUNMETAL	1	鋳物	一造機	艤装
	4	BUSH FOR TOP PINTLE	LIGNUMVITAE	1	—	〃	〃
	5	HARDENED CARRYING DISC	HARD STEEL	1 SET	鍊鉄	〃	〃
	6	WASHER	BRASS	1	一造機	〃	〃
	7	RUDDER STOPPER	FORGED STEEL	1	鍊鉄	一造機	〃
粗材 (0.30t)	8	BOTTOM PINTLE WITH NUT & SPLIT PIN	FORGED STEEL	1	外註	〃	〃
	9	SLEEVE FOR BOTTOM PINTLE	GUNMETAL	1	鋳物	一造機	〃
	10	BUSH FOR BOTTOM PINTLE	LIGNUMVITAE	1	—	〃	〃
	11	WASHER	BRASS	1	一造機	〃	〃
	12	BUSH STOPPER RING PLATE & STUDS	BRASS & F.STEEL	1 SET	艤装	—	〃
仕上迄 (但シ孔・仕上代 5m/m ヲ残スコト) (9.5t)	13	RUDDER STOCK	FORGED STEEL	1	外註	一造機	〃
仝上 (仝上) (2.85t)	14	RUDDER FRAME	CAST STEEL	1	〃	〃	船殻
粗材 (鋳バナシ) (0.93t)	15	BOTTOM BEARING	CAST STEEL	1	〃	〃	〃
	16	COUPLING BOLTS, NUT & SPLITPIN	FORGED STEEL	6 SETS	鍊鉄	〃	艤装
	17	COVER PLATE FOR BOTTOM PINTLE	STEEL PLATE	1	—	—	〃
	18	REMOVABLE CAP	STEEL PLATE	1	—	—	〃
	19	RUDDER CORNER PIECES	FORGED STEEL	2	鍊鉄	一造機	船殻
	20	RUDDER BODY	STEEL PLATE	1	—	—	〃
	21	BUSH STOPPER RING & STUDS	BRASS & F. STEEL	1	—	—	艤装
	22	PLUG SCREW	BRASS	2	—	—	〃
	23	EYE BOLT	FORGED STEEL	1	~~鍊鉄~~	艤装	〃
	24	COUPLING KEY	FORGED STEEL	1	〃	一造機	〃
	25	CAP STUDS	FORGED STEEL	3	〃	〃	〃

NOTE: MATERIALS OF (1) (2) (8) (13) (14) (15) (16) TO BE TESTED BY LLOYD'S & N.K.K.

RUDDER PARTICULARS

TYPE OF RUDDER	UNBALANCED RUDDER
SHIP'S PRINCIPAL DIMENSION	140.0M × 19.0M × 10.5M (d) 8.37
MAXIMUM SEA SPEED	16.0 KNOT
PROJECTED RUDDER AREA (A)	13.85 M² (149.08 ft²)
DO ABAFT PINTLES CR. LINE (AA)	12.59 M² (135.52 ft²)
DO BEFORE PINTLES CR. LINE (AF)	1.26 M² (13.56 ft²)
RUDDER HEAD	
HORIZONTAL DISTANCE FROM CR. OF GRAVITY OF "A" TO PINTLE CENTER LINE (D)	1.1 M (3.61 ft)
NUMERAL N = A × D = 149.08 × 3.61 = 538.18	
HORIZONTAL DISTANCE FROM CR. OF GRAVITY OF "AA" TO PINTLE CENTER LINE	25 × 1/2 = 1.25 (4 ft)
NUMERAL N' = AA × DA = 135.52 × 4 = 542.08	
80% OF N'	542.08 × .8 = 433.66
DIAMETER OF RUDDER HEAD	12"φ OR 305 mmφ (ACTUAL 310 mm φ)
PINTLE	
AREA SUPPORTED BY UPPER PIECE PINTLE	7.75 M² (83.4 ft²)
〃 〃 BOTTOM	6.10 M² 65.7 ft²
PINTLE DIAMETER OF UPPER & BOTTOM PINTLES	8.5" = 216 m/m φ 236 m/m φ

NOTE
1. DIMENSION MARKED × TO BE DISTINCTLY DETERMINED BY FAIRING IN THE MOLDLOFT
2. AIR & WATER TIGHTNESS OF RUDDER TO BE TESTED
3. WATER PRESSURE FOR TESTING WATER-TIGHTNESS IS 0.8 ATMOSPHERIC PRESSURE
4. PAINTING OF RUDDER (INSIDE) IS BITUMINOUS SOLUSION AND ENAMEL
5. MAXIMUM CARBON CONTENT OF CASTING NOT TO EXCEED .23% FOR WELDING PURPOSES

DEGREE OF FINISHING

∼	SMOOTH SURFACE
▽	ROUGH FINISH
▽▽	MEDIUM 〃
▽▽▽	FINE

紐育丸

S 104

STERN FRAME & RUDDER

(FINISHED PLAN)

船尾骨材
及
舵
(完成圖)

SCALE	1/4 1/5 1/10 1/15	DEPARTMENT CHIEF
ITEM	H 31 32	

HULL DESIGNING SECTION
OF
DESIGNING DEPARTMENT
NAGOYA SHIPBUILDING CO. LTD.
NAGOYA, JAPAN

SECTION CHIEF		CHECKED	
CHIEF IN CHARGE		DESIGNED	M. Sakata
FINISHED	APR. 23th 1953		
ISSUED	28. 4. 30		